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EXAMINER

JUSKA, CHERYL ANN

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**BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES**

Application Number: 09/926,109
Filing Date: September 04, 2001
Appellant(s): SMITH ET AL.

Harris Pitlick
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed March 2, 2005.

(1) *Real Party in Interest*

A statement identifying the real party in interest is contained in the brief.

(2) *Related Appeals and Interferences*

A statement identifying the related appeals and interferences which will directly affect or be directly affected by or have a bearing on the decision in the pending appeal is contained in the brief.

(3) *Status of Claims*

The statement of the status of the claims contained in the brief is correct.

(4) *Status of Amendments*

The appellant's statement of the status of amendments contained in the brief is correct.

(5) *Summary of Claimed Subject Matter*

The summary of the claimed subject matter contained in the brief is correct.

(6) *Grounds of Rejection to be Reviewed on Appeal*

The appellant's statement in the brief of the grounds of rejection to be reviewed on appeal is correct.

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(7) Claims Appealed

The copy of the appealed claims contained in the Appendix to the brief is correct.

(8) Prior Art of Record

JP 58-152037	Sumitomo Chemical Co.	09/1983
JP 58-041972	Sumitomo Chemical Co.	03/1983
US 6,162,848	Lattime et al.	09/04
US 5,851,625	Smesny et al.	12/1998
US 5,403,884	Perlinski	04/1995

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

A. Claims 1-3, 7, 8, 11, 12, 14, and 15 are rejected under 35 USC 102(b) as being anticipated by JP 58-152037 assigned to Sumitomo Chemical Co.

Sumitomo '037 discloses a fireproof adhesive backing for carpeting comprising 40-95% of polymer A and 5-60% of polymer B (translation, page 1, section 2). Polymer A is a copolymer of vinyl chloride and ethylene or a terpolymer of vinyl chloride, ethylene, and vinyl acetate. The weight ratio of the components of polymer A is 30-95% vinyl chloride, 5-70% ethylene, and 0-55% vinyl acetate (translation, page 1, section 2). Polymer A may be modified with up to 10 wt. % acrylamide or acrylic acid (translation, page 8, 1st paragraph). Polymer B is a synthetic rubber latex, such as a styrene-butadiene copolymer (SBR) or carboxylated SBR (translation, page 8, 2nd paragraph). Sumitomo '037 also teaches the adhesive backing is suited

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for carpets comprising a woven or nonwoven fabric comprised of fibers of polyester or polypropylene (translation, page 6, 2nd paragraph). Said adhesive is coated by well-known apparatuses onto the back of a carpet and a secondary backing can be adhered thereto to provide good tuft strength and bonding of said secondary backing (translation, page 10, 1st and 3rd paragraphs and page 11, 1st paragraph). The amount applied is preferably 0.1-2 kg/m² (translation, page 10, 1st paragraph). The adhesive composition may also include, if necessary, a filler, such as calcium carbonate, or a tackifier, such as polyvinyl alcohol or carboxymethyl cellulose (translation, page 9, 1st paragraph). Hence, claims 1-3, 7, 8, 11, 12, 14, and 15 are anticipated by the cited Sumitomo '037 reference.

B. Claims 1-3, 7, 8, 11, 12, 14, 15, 18, and 19 are rejected under 35 U.S.C. 102(b) as being anticipated by JP 58-041972 assigned to Sumitomo Chemical Co., Ltd.

Sumitomo '972 discloses a flame-retardant composition for flooring articles comprised of 10-90 parts by weight of polymer A which is a copolymer emulsion of 30-95 wt.% vinyl chloride, 5-70 wt.% ethylene, and 0-55 wt.% vinyl acetate and 10-90 parts by weight of polymer B which is a synthetic rubber latex system (translation, page 2, section 2). The flame-retardant composition is coated onto the backside of a carpet layer of implanted (i.e., tufted) or entangled (i.e., needlepunched) pile fibers and a secondary backing layer of a woven fabric or a film is applied thereto (translation, page 3, 1st paragraph). The composition prevents pile fibers from falling out and adds reinforcement to the flooring article (translation, page 3, 1st paragraph and page 4, 1st paragraph). In other words, the composition is an adhesive backcoat for a carpet, wherein said backcoat provides sufficient tuft bind strength and delamination strength between

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the primary backing and secondary backing. The flooring article comprises a woven or nonwoven fabric base (i.e., primary backing) of fibers such as polyester or polypropylene (translation, page 6, 1st paragraph). Polymer A may be modified with up to 10 wt. % acrylamide or acrylic acid (translation, page 7, 1st paragraph). Polymer B is a synthetic rubber latex, such as a styrene-butadiene copolymer (SBR) or carboxylated SBR (translation, page 7, 2nd paragraph). The adhesive backcoat composition may also include, if necessary, a filler, such as calcium carbonate, or a tackifier, such as polyvinyl alcohol or carboxymethyl cellulose (translation, paragraph spanning pages 7-8). Said adhesive backcoat is coated by well-known apparatuses onto the back of a carpet and a secondary backing can be adhered thereto to provide good tuft strength and bonding of said secondary backing (translation, paragraph spanning pages 8-9 and page 9, 2nd and 3rd paragraphs). The amount applied is preferably 0.1-2 kg/m² (translation, paragraph spanning pages 8-9). Thus, claims 1-3, 7, 8, 11, 12, 14, 15, 18, and 19 are anticipated by the cited Sumitomo '972 reference.

C. Claims 16 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over either the cited Sumitomo '037 or Sumitomo '972 references.

Sumitomo '037 fails to explicitly teach the materials and structure of the secondary backing, while Sumitomo '972 teaches a woven hemp fabric (translation, page 9, 2nd paragraph). However, applicant is hereby given Official Notice that secondary backings are commonly made of a woven polypropylene fabric. Hence, it would have been obvious to one skilled in the art to employ a woven polypropylene secondary backing. Therefore, claims 16 and 17 are rejected as being obvious over the prior art.

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D. Claim 4 is rejected under 35 USC 103(a) as being unpatentable over either the cited Sumitomo '037 or Sumitomo '972 references in view of US 6,162,848 issued to Lattime et al.

Sumitomo '037 and '972 lack a teaching of the amount of acid employed in the carboxylated SBR. However, said carboxylated SBR's are well known in the latex and carpet arts. For example, Lattime discloses a latex for a carpet backing comprising a carboxylated styrene-butadiene polymer containing 45-74.5 wt. % styrene, 25-50 wt. % butadiene, and 0.5-5 wt. % of an unsaturated carboxylic acid (col. 2, lines 50-55). Thus, it would have been obvious to one skilled in the art to employ the claimed amount of acid in the carboxylated SBR disclosed by Sumitomo '037 or Sumitomo '972 in order to provide enhanced bond strength of said latex. Therefore, claim 4 is rejected.

E. Claims 5, 6, and 13 are rejected under 35 USC 103(a) as being unpatentable over either the cited Sumitomo '037 or Sumitomo '972 references in view of US 5,851,625 issued to Smesny et al.

Sumitomo '037 and '972 fail to teach the use of a thickener in the inventive latex. However, said use is well known in the latex and carpet arts. Thickeners are added to increase the viscosity so that said latex does not penetrate through to the face fibers of the tufted primary backing. For example, Smesny teaches conventional prior art carpet latexes includes a thickener which is typically polyacrylic acid (col. 7, lines 45-46). Thus, it would have been obvious to one skilled in the art to add a polyacrylic acid thickener in order to adjust the viscosity of the Sumitomo '037 or '972 latexes to achieve proper penetration into the tufted primary backing and

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secondary backing to provide sufficient tuft bind and delamination strength. Therefore, claims 5, 6, and 13 are rejected over the prior art references.

F. Claims 20 and 21 are rejected under 35 USC 103(a) as being unpatentable over the cited Sumitomo '972 reference.

Claims 20 and 21 limit the amount of polymer A to being less than 10%. Sumitomo '972 teaches polymer A to be present in an amount of 10-90%. However, it would have been obvious to one skilled in the art to employ less than 10% polymer A (e.g., 9.99%). Specifically, determining the balance of polymer A and polymer B would be a matter of obtaining the desired properties of the overall latex based upon the amounts of said polymers and the properties that each polymer contributes. It has been held that discovering an optimum value of result a effective variables requires only routine skill in the art. *In re Boesch*, 205 USPQ 215. Therefore, claims 20 and 21 are rejected as being obvious over the cited prior art.

G. Claim 13 is rejected under 35 USC 103(a) as being unpatentable over US 5,403,884 issued to Perlinski in view of US 5,851,625 issued to Smesny et al.

Perlinski discloses a process for flocking an elastomeric substrate including the steps of (a) applying an aqueous adhesive comprising 10-100% of an alkaline dispersion of an ethylene carboxylic acid copolymer and 0-90% of an aqueous elastomeric dispersion, (b) applying a flock layer to the adhesive coated substrate, and (c) drying the adhesive (abstract). The ethylene carboxylic acid copolymer, corresponding to applicant's A polymer, comprises ethylene and 1-30% by weight of an ethylenically unsaturated carboxylic acid (col. 1, line 62-col. 2, line 1). The

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elastomeric dispersion, which corresponds to applicant's B polymer, may be a diene-containing elastomeric polymer, such as carboxylated styrene-butadiene, EPDM, and polybutadiene (col. 5, lines 1-35). The adhesive may optionally include fillers, pigments, and viscosity improvers (i.e., thickeners) (col. 6, lines 11-14). Perlinski teaches the flocked substrate may be suitable for flocked mats and flocked floor coverings (col. 6, lines 65-68).

Thus, Perlinski teaches the invention of claim 13 with the exception of the specified thickener. As discussed above, Smesny teaches conventional prior art carpet latexes includes a thickener, which is typically polyacrylic acid (col. 7, lines 45-46). Hence, it would have been obvious to one skilled in the art to add a polyacrylic acid thickener in order to adjust the viscosity of the Sumitomo latex. Therefore, claim 13 is obvious over the cited Perlinski and Smesny patents.

H. Claim 21 is rejected under 35 USC 103(a) as being obvious over 5,403,884 issued to Perlinski.

Perlinski discloses the claimed invention with the exception that polymer A is less than 10% by weight. Perlinski teaches said amount ranges from 10-90% by weight. However, it is argued that it would have been obvious to one skilled in the art to employ less than 10% (i.e., 9.99 %), since it has been held that discovering an optimum value of result a effective variables requires only routine skill in the art. *In re Boesch*, 205 USPQ 215. Specifically, determining the balance of polymer A and polymer B would be a matter of obtaining the desired properties of the overall latex based upon the amounts of said polymers and the properties that each polymer contributes. Therefore, claim 21 is rejected over the cited Perlinski reference.

I. Claims 22-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over the cited Sumitomo '037 reference *or* the cited Sumitomo '972 reference as applied to claims 2 and 3 above.

Claims 27-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over the cited Sumitomo '037 reference *or* the cited Sumitomo '972 reference in view of the cited Smesny reference, as applied to claim 13 above.

Claims 27-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over the cited Perlinski reference in view of the cited Smesny reference, as applied to claim 13 above.

Claims 22 and 27 limit polymer A of claims 3 and 13 to being 70-99.5% by wt. of ethylene and 0.5-30% by wt. of an ethylenically unsaturated acid, while claims 23 and 28 further limit polymer A of claims 22 and 27 to being 70-95% by wt. of ethylene and 5-30% by wt. of an ethylenically unsaturated acid. Both Sumitomo references teach an ethylene content of 5-70% for polymer A and up to 10% by wt. of acrylic acid, while Perlinski teaches an ethylene carboxylic acid copolymer comprising 1-30% by weight of said acid. As such, it would have been readily obvious to one skilled in the art to select polymer A with the claimed amounts of ethylene and acrylic acid. Motivation to do so would be the explicit teaching of the Sumitomo and Perlinski references that compositions having 70% ethylene and up to 10% of acid are suited for the invention.

Regarding claims 24-26 and 29, which limit the amounts of polymer A to 0.5-20%, preferably 1 to less than 10% or 1-5%, it is noted that Sumitomo '037 teaches a lower limit for polymer A of 40%, while Sumitomo '972 and Perlinski both teach said lower limit is 10%. As such, it would have been readily obvious to one skilled in the art to select polymer A in an

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amount of 10-20%. Hence, claim 24 is rejected. Additionally, although the claimed less than 10% or 5% falls outside of the scope explicitly taught by both of the Sumitomo references and the Perlinski reference, it is argued these amounts are obvious over the prior art. Specifically, determining an optimum proportions of polymer A to polymer B would be a matter of obtaining the desired properties of the overall latex based upon the amounts of said polymers and the properties that each polymer contributes. Thus, claims 24-26 and 29 are rejected as being obvious over the cited prior art.

(10) Response to Argument

A. Appellant traverses the 102 rejection by Sumitomo '037 by asserting the prior art composition is a precoat rather than adhesive backcoat that bonds a secondary backing to the tufted primary backing (Brief, page 10, 1st and 2nd paragraphs). The examiner respectfully disagrees. First note that the main difference between an adhesive precoat and a backcoat is merely the adjoining layers. In the carpet art, a tufted primary backing is commonly coated with an adhesive backcoat that binds the tufts to said primary backing and, if a secondary backing is employed, also bonds said secondary backing thereto. In an alternative embodiment, a carpet may be precoated with an adhesive precoat to reinforce the tuft bind and then coated with an adhesive backcoat to further reinforce said tufts and to bond said secondary backing thereto. If a secondary backing is not employed, said adhesive backcoat and/or precoat is still commonly employed to bind the tufts and add dimensional stability to the carpet. Hence, a conventional tufted carpet will have an adhesive backcoat, but may not have a precoat layer or secondary backing layer. In other words, a coating on the backside of a tufted primary backing is only

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described as a precoat if an additional adhesive layer is added. If no additional adhesive layer is added, then said coating is merely described as an adhesive backcoat. Also note that the compositions of precoats and adhesive backcoats are commonly the same or only slightly different with respect to viscosity and/or filler content.

It is also noted that in the English translations of both Sumitomo references, the phrase “packing composition for laying articles” is interpreted as “backing composition for floor coverings.” Additionally, “secondary processing material” is interpreted as a “secondary backing material.”

Appellant believes that the statement by Sumitomo '037 at page 10, 3rd paragraph (i.e., “the adhesion with a secondary processing material is also good”) is negated by the teaching of drying the composition (Brief, page 10, 1st paragraph). To the contrary, Sumitomo '037, page 3, lines 8-20, discusses reinforcing the pile tufts by backcoating with a resin (i.e., adhesive backcoat). Specifically, the reference states, “Among these reinforcing techniques, as the most general method, there is a method that spreads a packing composition being constituted by mixing a packing material such as natural or synthetic rubber latex with a filler and other mixtures on the back face of the laying article or if necessary, attaches a woven fabric or forms a thermoplastic synthetic resin film.” Thus, Sumitomo '037 discusses an *adhesive backcoat*, not a precoat, that is bonded with an *optional* secondary backing of a woven fabric *or* thermoplastic film.

Additionally, appellant’s assertion that Sumitomo teaches drying the composition prior to affixing any secondary backing is based upon a misinterpretation of the reference. Appellant is referring to the working examples of Sumitomo '037 (page 10, 4th paragraph – page 13), which

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provide an adhesive backcoated carpet *without* the *optional* secondary backing. However, a reference is not limited to its working embodiments, but rather said reference is relied upon as a whole. Sumitomo '037 clearly teaches an adhesive backcoat composition, wherein a secondary backing is optional, but when employed, said composition provides good adhesion thereto.

Appellant also traverses the anticipation rejection by noting Sumitomo '037's teaching of a tackifier (Brief, page 11, 1st paragraph). Specifically, appellant asks why the addition of a tackifier is necessary if the composition is intended to be used as an adhesive *per se*. This argument is confusing because of its somewhat circular nature. Tackifiers are common in the art of adhesives. Are adhesive compositions rendered adhesive by the inclusion of the tackifier or are said compositions inherently adhesive (i.e., tacky)? It seems appellant is of the latter school of thought. Either way, the teaching of a tackifier in the Sumitomo reference does not negate the teaching of the composition binding tufts and an optional secondary backing.

Appellant asserts the burden is on the examiner to "demonstrate that the reference is accurately interpreted as anticipatory" (Brief, page 11, 2nd paragraph). The examiner believes said burden has been fully met. In particular, the reference clearly teaches a backing composition that functions to bind tufts of yarn to a primary backing and to bond an optional secondary backing thereto (i.e., an adhesive backcoat). Note Sumitomo '037 does not teach adding a second adhesive layer. Remember, the backing composition is only a precoat if a second adhesive coat is applied before applying an optional secondary backing. As such, the composition is deemed an adhesive backcoat layer and not a precoat layer. Also, note appellant has not traversed the assertion that the composition of Sumitomo '037 anticipates the

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composition of claims 1-3, 7, 8, 11, 12, 14, and 15. Hence, it is presumed this assertion is conceded. Therefore, appellants arguments are found unpersuasive.

Appellant asserts the separate patentability of claims 11 and 12 (Brief, page 11 3rd and 4th paragraphs), but merely relies upon the traversal of the Sumitomo '037 reference as discussed above. The examiner respectfully disagrees since Sumitomo '037 teaches applying the composition in an amount of 0.1 - 2 kg/m² which overlaps the range of 0.02 – 1 kg/m² recited in claim 11. Additionally, with respect to claim 12, Sumitomo '037 teaches the adhesive composition is coated by well-known apparatuses onto the back of a carpet and a secondary backing can be adhered thereto (translation, page 10 1st and 3rd paragraphs and page 11, 1st paragraph). Thus, appellant's arguments regarding the separate patentability of said claims is also found unpersuasive.

B. Regarding the 102 rejection of the claims by Sumitomo '972, appellant makes the same basic argument that the reference teaches a precoat rather than an adhesive backcoat (Brief, paragraph spanning pages 12-13). Since Sumitomo '972 has the same teachings of "adhesion with a secondary processing material is good" and "drying," the arguments set forth above with respect to Sumitomo '037 are relied upon here also.

Additionally, appellant argues that the teaching in Sumitomo '972 at page 9, 2nd paragraph suggests "a thermoplastic resin such as ethylene performs the function of the presently-recited adhesive" (Brief, page 13, lines 5-10). The examiner respectfully disagrees. It appears applicant has misread the recitation of Sumitomo '972. First, applicant seems to completely ignore the first part of said recitation, which discusses the woven secondary backing.

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In particular, said recitation clearly teaches an embodiment wherein a woven hemp secondary backing is bonded to primary backing by way of the adhesive backcoat (i.e., inventive composition), presumably before drying said backcoat. Secondly, said recitation also teaches an alternative embodiment wherein said secondary backing is a thermoplastic film. In this case, the adhesive backcoat is dried before application of said film.

Appellant traverses the examiner's position on this issue, first set forth in the Final Rejection of 01/14/05, section 14, by disagreeing that the reference "discloses or suggests adhering a woven hemp fabric without the presence of a film formed by melting a thermoplastic synthetic resin such as polyethylene" (Brief, page 14, 1st paragraph). However, appellant fails to present any reasoning to support this interpretation. The examiner's interpretation is based upon the actual language of the reference at page 9, 2nd paragraph:

Also, in order to render special functions such as high shape stability or rendering of shape characteristic, a secondary processing is also effective. For example, a woven hemp fabric is adhered in a superposed fashion after spreading the composition, *or* after drying, a film is formed by melting a thermoplastic synthetic resin such as polyethylene. [Emphasis added.]

Said recitation of the reference teaches secondary processing (i.e., secondary backings) can be employed to "render special functions" of dimensional stability. Said recitation then gives examples of said secondary processing. The first example is of a woven hemp fabric that is "adhered in a superposed fashion after spreading the composition," while the second example is of a film that is formed on the composition "after drying" of said composition. Said recitation does not in any way state the hemp woven fabric is adhered by the melted resin after drying of the adhesive backing composition, but rather it clearly states the hemp fabric is adhered after spreading the composition." Note the recitation does not say the hemp fabric is adhered "after spreading the composition *and* after drying" but rather "or." In the English language, the use of

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“or” is indicative of an alternative option. It seems abundantly clear that the reference is teaching alternative embodiments of secondary backings rather than a single embodiment as appellant believes.

Appellant also reiterates the “tackifier” argument, the argument of the examiner’s burden, and the separable patentability of claims 11 and 12 (Brief, page 14, 2nd paragraph – paragraph spanning pages 14-15). The examiner’s comments set forth above in the Sumitomo ‘037 rejection are also applicable here. Hence, appellant’s argument are not persuasive and the rejection based upon the Sumitomo ‘972 reference is maintained.

C. Appellant traverses the 103 rejections of claims 16, 17, and 22-26 over either Sumitomo reference, by relying upon the traversal of the anticipation rejections of said references (Brief, page 15, 1st and 2nd paragraphs). Since appellant has failed to question the Official Notice given for the rejection of claims 16 and 17, it is presumed that appellant has conceded the noticed fact.

Appellant asserts claims 22 and 23 are separately patentable because both the Sumitomo references require polymer A to contain 30-95% vinyl chloride (Brief, page 15, 3rd and 4th paragraphs). Note the references teach polymer A comprises 30-95% vinyl chloride, 5-70% ethylene, and 0-55% vinyl acetate. It seems that appellant is arguing that since 30-95% of polymer A is vinyl chloride and 5-70% of polymer A is ethylene, this leaves no room for the claimed range of ethylenically unsaturated acid. In other words, the addition of said acid would produce a balance greater than 100%. According to appellant’s logic, then Sumitomo’s own

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explicit disclosure of up to 10 wt. % acid is impossible. Obviously, this is not the case and appellant's argument is found unpersuasive.

Similarly, appellant asserts claims 25 and 26 are separately patentable since the references require ethylene in minimum amounts that fall outside of the scope of said claims (i.e., less than 10% and less than 5%, respectively) (Brief, page 16, 1st and 2nd paragraphs). In response, it is noted that the rejections were not based upon a 102 anticipation rejection, but rather a 103 obviousness rejection. Appellant has failed to specifically address the 103 arguments regarding the motivation to manipulate the ranges.

D. Appellant traverses the rejection of claim 4 over either of the Sumitomo references in view of Lattime by merely asserting that even if the Sumitomo styrene-butadiene rubbers were carboxylated according to Lattime, "the result would not be the presently-claimed invention." (Brief, page 17, 2nd paragraph). From this appellant concludes, "That rejection is untenable and should not be sustained." (Brief, page 17, 1st paragraph). In other words, appellant has failed to specifically address the obviousness of carboxylating the styrene-butadiene rubbers of Sumitomo. One can only presume appellant intends to rely upon the previous traversals of the Sumitomo references. Since, said rejections are being maintained, the rejection of claim 4 over Sumitomo '037 or '972 in view of Lattime is also maintained.

E. With respect to the rejection of claims 5, 6, 13, and 27-29 over either of the Sumitomo references in view of Smesny, appellant argues impermissible hindsight reasoning on the examiner's behalf (Brief, page 17, 4th paragraph). Specifically, appellant argues it is not

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clear why one would add a thickener to the backing compositions of Sumitomo without the present disclosure as a guide (Brief, page 17, 4th paragraph). In response, it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971). It is reiterated that the use of thickeners is well known in the carpet art. Thickeners are added to increase the viscosity of an adhesive backcoat composition to prevent penetration of said backcoat through to the face fibers of the tufted primary backing. Smesny clearly teaches thickeners are common in carpet backcoats. Thus, it is believed the rejection only took into account knowledge that was within the level of ordinary skill and does not include knowledge gleaned from appellant's disclosure. Therefore, appellant's arguments are unpersuasive and the above rejection is maintained.

Additionally, appellant asserts claims 27 and 28 are separately patentable because both the Sumitomo references require polymer A to contain 30-95% vinyl chloride (Brief, paragraph spanning pages 17-18 and page 18, 1st paragraph). As discussed above with respect to claims 22 and 23, this argument is found unpersuasive.

Furthermore, appellant asserts claim 29 is separately patentable since the references require ethylene in minimum amounts that fall outside of the scope of said claim (i.e., less than 5%) (Brief, page 18, 2nd paragraph). Again, it is noted that the rejections were not based upon a 102 anticipation rejection, but rather a 103 obviousness rejection. Appellant has failed to specifically address the 103 arguments regarding the motivation to manipulate the ranges.

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F. Appellant argues the 103 rejections of claims 20 and 21 by arguing one would not be motivated to reduce the amount of ethylene in polymer A to less than 10% because Sumitomo '972 teaches less than 10% produces insufficient flame retardation (Brief, paragraph spanning pages 18-19). In response, the claimed range of "less than 10%," which includes the value 9.99%, and the disclosed value of "10%" are not believed to be patentable distinct. MPEP 2144.05, II. *Obviousness of Ranges* states the following:

Generally, differences in concentration or temperature will not support the patentability of subject matter encompassed by the prior art unless there is evidence indicating such concentration or temperature is critical. "[W]here the general conditions of a claim are disclosed in the prior art, it is not inventive to discover the optimum or workable ranges by routine experimentation." *In re Aller*, 220 F.2d 454, 456, 105 USPQ 233, 235 (CCPA 1955) (Claimed process which was performed at a temperature between 40°C and 80°C and an acid concentration between 25% and 70% was held to be prima facie obvious over a reference process which differed from the claims only in that the reference process was performed at a temperature of 100°C and an acid concentration of 10%).

Appellant has failed to show any unexpected results, criticality, or other secondary considerations for the limitation of less than 10% ethylene content in polymer A that might overcome the prima facie case of obviousness. Hence, appellant's arguments are found unpersuasive.

G. Appellant traverses the rejection of claims 13 and 27-29 over Perlinski and Smesny by asserting Smesny "does not remedy the above-discussed deficiencies of Perlinski" (Brief, page 20, 1st paragraph). In the preceding paragraph of the Brief (Brief, paragraph spanning pages 19-20), appellant discusses the disclosure of Perlinski, but fails to specifically point out any deficiencies of the reference. It is noted for the record that Perlinski is directed to a flocked article rather than a carpet having a primary backing and a secondary backing. However, claim 13 is not so limited. Rather, claim 13 is drawn to an adhesive composition. Additionally,

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while Perlinski prefers a polymer A concentration of 50-70% and exemplifies polymer A in an amount of 73%, Perlinski teaches polymer A may range from 10-100%. Hence, the examiner does not see any deficiencies with the Perlinski reference other than the lack of a teaching to the specifically claimed thickener, for which the Smesny reference is relied upon.

Appellant also asserts even if the thickener of Smesny were added to the adhesive of Perlinski, “the result would still not be the presently-claimed invention” (Brief, page 20, 1st paragraph). The examiner fails to see how the combination of Perlinski and Smesny fails to produce the invention of claims 13 and 27-29.

Appellant also argues the rejection by asserting there is no reason to select the Smesny thickener without the present disclosure as a guide (Brief, page 20, 2nd paragraph). The examiner respectfully disagrees since Perlinski teaches the adhesive may include conventional additives such as fillers, pigments, and viscosity improvers (i.e., thickeners) (Perlinski, col. 6, lines 11-14). Additionally, Smesny clearly teaches conventional prior art latex coatings include thickeners, which is typically polyacrylic acid (Smesny, col. 7, lines 45-46). Hence, the present disclosure is not relied upon at all to provide motivation to add the polyacrylic acid thickener to the Perlinski adhesive.

Appellant argues the separate patentability of claim 29 by asserting the claimed amount of polymer A (i.e., 5%) is outside of the scope of Perlinski (Brief, page 20, 3rd paragraph). Again, it is noted that the rejections were not based upon a 102 anticipation rejection, but rather a 103 obviousness rejection. Appellant has failed to specifically address the 103 arguments regarding the motivation to manipulate the ranges.

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H. Appellant traverses the 103 rejection of claim 21 over Perlinski by stating the minimum amount of polymer A taught by Perlinski (i.e., 10%) is outside of the scope of the present claim (i.e., less than 10%) (Brief, page 20, 5th paragraph). Appellant finally argues it is not obvious to optimize a variable outside of the range of the reference by citing *In re Sebek*, 175 USPQ 93 (Brief, page 21, 1st paragraph). In response, *Sebek* dealt with whether or not a rejection based upon the obviousness of optimizing an amount outside of the range taught by the prior art was proper *prima facie* case. The courts, while admitting such a rejection was ordinarily proper, disagreed based on the facts of the particular case. Specifically, the facts of the case warranted a reversal of the rejection due to the expert testimony presented and the high unpredictability of the art. Such is not the case with the presently claimed invention. Appellant has not provided any evidence of unexpected results or other showing of secondary considerations. Without such a showing, the examiner cannot find any patentable distinction between the claimed “less than 10%” value and the disclosed “10%” value.

I. Regarding appellant’s discussion of present invention and the comparative data set forth in the specification (Brief, pages 6-9), it is noted that said data merely compares adhesive compositions of the invention (i.e., comprising polymers A and B) with adhesive compositions lacking polymer A (i.e., only polymer B or styrene-butadiene latexes). Thus, while said data may show an improvement over conventional prior art styrene-butadiene latexes, the data does not show an improvement over the closest prior art of record. In other words, the data does not show an improvement achieved from the claimed invention comprising less than 10% of polymer A compared to the 10% polymer A compositions of the cited prior art.

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J. In summary, the above rejections should be maintained since both Sumitomo references clearly teach the same compositional elements and the use of the adhesive composition for binding tufts in a primary backing and for bonding with an optional secondary backing. Similarly, Perlinski teaches the same compositional elements of an adhesive composition. Additionally, appellant has not properly rebutted the *prima facie* case of obviousness with respect to the claims that recite ranges just outside of the scope of the ranges disclosed in the cited prior art. Without a sufficient showing of unexpected results achieved or other secondary considerations, said *prima facie* case is considered proper. In other words, without such a showing, the distinction between "less than 10%" and "10%" is not believed to be patentable. For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,


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